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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,268	02/07/2002	Mathieu Desbrun	01339.0009.NPUS01	9019

7590 03/22/2004

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EXAMINER

NGUYEN, PHU K

ART UNIT	PAPER NUMBER
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2671

DATE MAILED: 03/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/071,268

Applicant(s)

DESBRUN ET AL.

Examiner

Phu K. Nguyen

Art Unit

2671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Phu K. Nguyen
PHU K. NGUYEN
ART UNIT 2671
MAR 11 2002

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-13 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." *State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (*Brenner v. Manson*, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); *In re Ziegler*, 992, F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)). Accordingly, a complete disclosure should contain some indication of the practical application for the claimed invention, i.e., why the applicant believes the claimed invention is useful.

In claim 1, and its dependent claims, the claimed "method for deriving barycentric coordinates for a point p within an n-sided polygon" shows no "useful, concrete, and tangible result" besides the calculation method to generate the values of coordinates of the vertices. See MPEP 2106.

In claim 4, and its dependent claims, the claimed "method for deriving weights for expressing a vertex in a mesh representation of an object surface in terms of its one-ring neighbors" shows no "useful, concrete, and tangible result" besides the calculation method to generate the values of coordinates of the vertices. See MPEP 2106.

In claim 7, and its dependent claims, the claimed “method of parameterizing a mesh representation of an object surface comprising the steps of: for one or more vertices of the mesh representation, computing for one or more of its one-ring neighbors” shows no “useful, concrete, and tangible result” besides the calculation method to generate the values of coordinates of the vertices. See MPEP 2106.

In claim 11, and its dependent claims, the claimed “method of parameterizing a mesh representation of an object surface comprising the steps of: a step for computing, for one or more vertices of the mesh representation and one or more of its one-ring neighbors” shows no “useful, concrete, and tangible result” besides the calculation method to generate the values of coordinates of the vertices. See MPEP 2106.

Claim 12 claims methods of claims 1-11 tangibly “embodied on or in a memory” which shows no “useful, concrete, and tangible result”. It is unclear as what of method is embodied or such method “embodied in a memory” can be useful. See MPEP 2106.

Claim 12 claims “the method is embodied as a series of instructions or program code stored in the memory” which shows no “useful, concrete, and tangible result”. It is unclear as whether the instructions perform the steps or such method “embodied in a memory” can be useful. See MPEP 2106.

Claims 1-13 are rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a substantial or useful asserted utility or a well established utility.

To satisfy the requirements of 35 U.S.C. 101, an applicant must claim an invention that is statutory subject matter and must show that the claimed invention is “useful” for some purpose either explicitly or implicitly. Courts have used the labels “practical utility,” “substantial utility,” or “specific utility” to refer to this aspect of the “useful invention” requirement of 35 U.S.C. 101. The Court of Customs and Patent Appeals has stated: Practical utility is a shorthand way of attributing “real-world” value to claimed subject matter. In other words, one skilled in the art can use a claimed discovery in a manner which provides some immediate benefit to the public. *Nelson v. Bowler*, 626 F.2d 853, 856, 206 USPQ 881, 883 (CCPA 1980).

In claim 1, and its dependent claims, the claimed “method for deriving barycentric coordinates for a point p within an n-sided polygon” shows no define of “a real world” use or a specific utility besides the calculation method to generate the values of coordinates of the vertices. See MPEP 2107.

In claim 4, and its dependent claims, the claimed “method for deriving weights for expressing a vertex in a mesh representation of an object surface in terms of its one-ring neighbors” shows no define of “a real world” use or a specific utility besides the calculation method to generate the values of coordinates of the vertices. See MPEP 2107.

In claim 7, and its dependent claims, the claimed “method of parameterizing a mesh representation of an object surface comprising the steps of: for one or more vertices of the mesh representation, computing for one or more of its one-ring neighbors” shows no define of “a real world” use or a specific utility besides the

calculation method to generate the values of coordinates of the vertices. See MPEP 2107.

In claim 11, and its dependent claims, the claimed "method of parameterizing a mesh representation of an object surface comprising the steps of: a step for computing, for one or more vertices of the mesh representation and one or more of its one-ring neighbors" shows no define of "a real world" use or a specific utility besides the calculation method to generate the values of coordinates of the vertices. See MPEP 2107.

Claim 12 claims methods of claims 1-11 tangibly "embodied on or in a memory" which have not defined "a real world" use or a specific utility. It is unclear as such methods "embodied in a memory" can be useful. See MPEP 2107.

Claim 12 claims "the method is embodied as a series of instructions or program code stored in the memory" which have not defined "a real world" use or a specific utility. It is unclear as such methods "embodied in a memory" can be useful. See MPEP 2107.

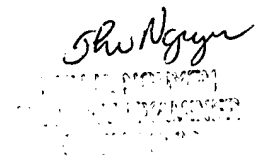
Claims 1-13 are also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either a substantial or useful asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phu K. Nguyen whose telephone number is (703)305 - 9796. The examiner can normally be reached on M-F 8:00-4:30.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phu K. Nguyen
March 15, 2004

A handwritten signature of Phu K. Nguyen is written over a circular official stamp. The stamp contains text that is partially obscured by the signature and is difficult to read, but it appears to be an official seal or stamp from the USPTO.